

INFRAVISION

# Ulysses nano | C

Compact fix-viewed marine color camera



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# 01 - Important information

## 1.1 For your safety

To prevent damage to your Infravision Technology product or injury to yourself or others, read the following safety precautions in their entirety before using this equipment. Keep these safety instructions where all those who use the product will read them.



### **WARNING**

The consequences that could result from failure to observe the precautions listed in this section.

### **Product installation and operation**

This product must be installed and operated by the instructions provided. Failure to do so could result in injuries, damage to the vessel and/or poor product performance.

### **Corrosion**

To avoid excessive galvanic corrosion of the product, use non-metallic insulation when fitting the product directly onto stainless steel platforms/mounts or vessels.

### **Power supply voltage**

Connecting this product to a voltage supply greater than the specified maximum rating may cause permanent damage to the unit. Refer to the technical specification for voltage rating.

### **Power supply protection**

When installing this product, ensure the power source is adequately protected by using a suitably rated fuse or automatic circuit breaker.

### **Potential ignition source**

Do not use electronic equipment in the presence of flammable gas, as this could result in an explosion or fire. Also, do not install in a hazardous/ flammable atmosphere such as engine room or near fuel tanks.

### **Entrapment hazard**

This product features moving parts that may pose potential hazards for entrapment. Therefore, always keep clear of moving parts.

### **Ensure safe navigation**

This product is intended only as an aid for navigational safety and must not be used as a substitute for sound navigational skills and practice. Always maintain a permanent watch while the vessel is underway. Failure to maintain a permanent watch puts yourself, your vessel, and others at serious risk of harm.

### **IMO and SOLAS**

This product is intended for marine vessels not covered by the International Maritime Organization (IMO) and Safety of Life at Sea (SOLAS) Carriage Regulations.

### **Using the supplied cables as is**

Do not cut or extend all Omnisense Systems supplied cables unless doing so is detailed in the installation manual.

### **Do not open or disassemble**

The unit is factory sealed to protect against atmospheric humidity, suspended particulates, and other contaminants. Do not open the Camera for any reason. Disassembly of the Camera or any unauthorized tampering can cause permanent damage to the system and will void the manufacturer's warranty.

### **Warranty registration**

To register your Infravision Technology product ownership, please visit our website at [www.infravision-tech.com](http://www.infravision-tech.com) and register online. You must register your product to receive full warranty benefits. Your unit package includes a bar code label indicating the unit's serial number. You should retain the label for future reference.

## **1.2 Notices**

© Infravision Technology, 2025. All rights reserved. No part of the manuals included with this product may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form, by any means, without Infravision Technology' prior written permission. Names and marks appearing on the products herein are registered trademarks or trademarks of Infravision Technology and/or its subsidiaries. All other trademarks, trade names, or company names referenced herein are used for identification only and are the property of their respective owners.

Due to our policy of continuous product improvement, Infravision Technology reserves the right to change the hardware and software specifications described in these manuals at any time and without prior notice.

Infravision Technology will not be held liable for any damages resulting from the use of this product.

While every effort has been made to ensure that the information in these manuals is accurate and complete, we would appreciate it if you were to bring any errors or omissions to the attention of the Infravision Technology representative in your area.



In accordance with European Union (EU) Waste Electrical and Electronic Equipment Directive 2002/96/EC (WEEE), all Electrical and Electronic Equipment (EEE) products labeled with the “crossed-out wheeled bin” either on the product itself or in the product literature is to be collected separately. Therefore, the following applies only to users in European countries:

This product is designated for a separate collection at an appropriate collection point. Therefore, do not dispose of as household waste.

Separate collection and recycling help conserve natural resources and prevent negative consequences for human health and the environment that might result from incorrect disposal.

Contact the retailer or the local authorities in charge of waste management for more information.

## 02 - Introduction

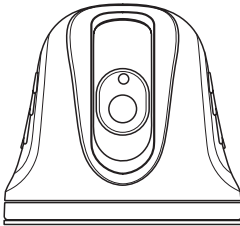
Thank you for choosing the Ulysses Nano C. The Ulysses Nano C system comes with all the components ready to install (in most cases) and operate, making it the most user-friendly marine thermal camera system available. It is designed to seamlessly integrate with many popular Multi-function Displays (MFDs). Please check our website support page for the latest supported brands and models. This manual will provide you with all the information you need for installation and familiarize you with the functions.

### 2.1 Document information

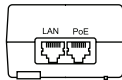
This document contains relevant information about the installation and operation of the camera system you have purchased. It is also available for download from our website: [www.infravision-tech.com](http://www.infravision-tech.com).

### 2.2 What's in the package

Ulysses Nano C system includes the following items:



Camera



PoE injector

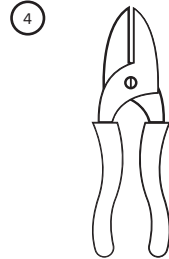
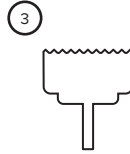
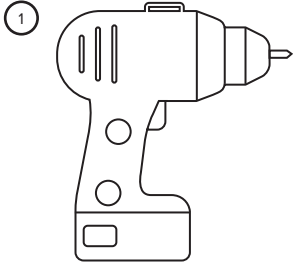


RJ45 Field Installable  
Connector

### 2.3 Installation tools requirements

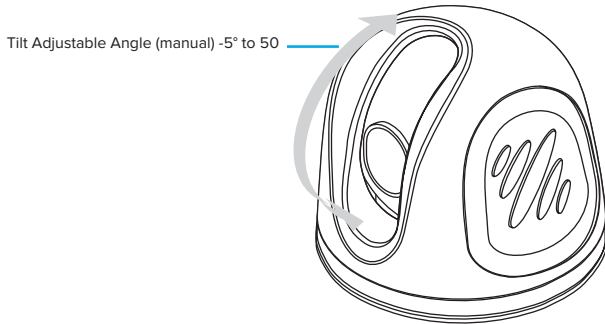
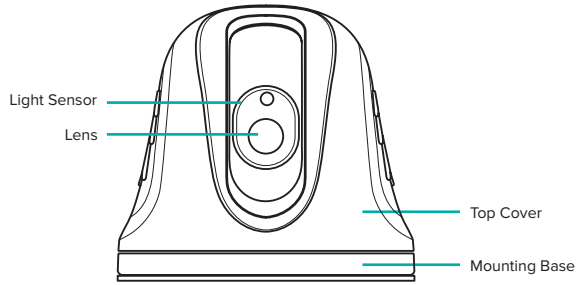
The following are additional tools and items required for installation that are not included in the package.

1. Drill
2. Drill bit (if installing with M5 machine screws) - 0.24in (6mm)
3. Hole Saw - 0.87 in (22mm)
4. Cutter (for removing excess ends of the cable ties)



## 2.4 Getting to know the camera

Take a few moments to familiarize yourself with camera controls and displays.



## **03 - Installation & setup**

### **3.1 Installation checklist**

The installation of the system will include the following tasks:

1. Planning your system setup
2. Prepared all required tools and items
3. Site the individual equipment
4. Route the cables
5. Drill the mounting and cable holes for Camera
6. Connect the cables to the products
7. Secure all products in place
8. Power on and test the system
9. Perform cable management

### **3.2 Cable management**

Cable routing must be conducted correctly to maximize the performance and shelf life of the cables. Do not bend the cable excessively. Please ensure that a minimum bend radius of 3in (150mm) is achieved.

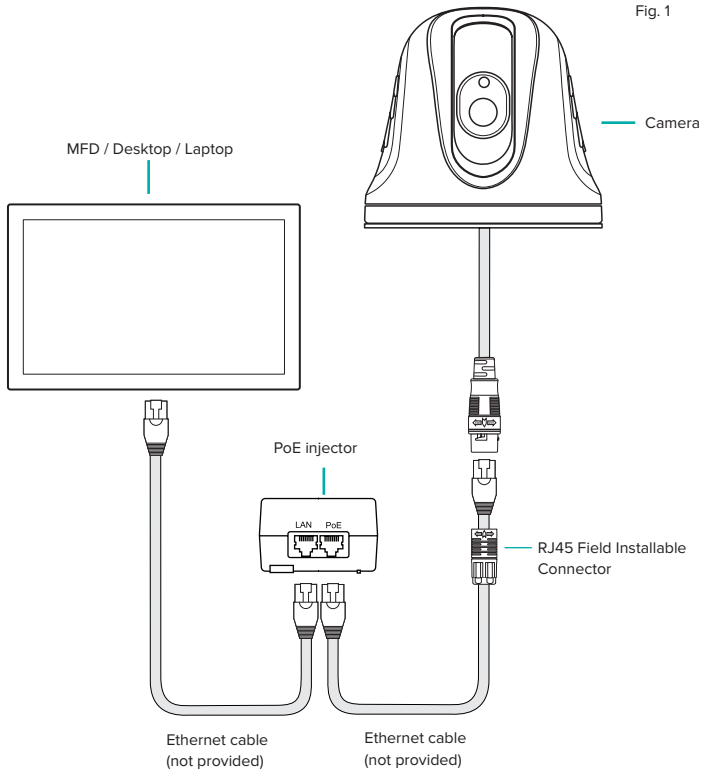
Protect all cables from physical damages by using trunking or conduit where possible. Do not run cables through bilges, doorways, hatches, and hot objects.

Always ensure that data cables are routed at a considerable distance from other equipment and cables, as well as high current-carrying AC/DC power lines and antennas.

### 3.3 Layout & location

Before you commence the installation, it is important to produce a schematic diagram. The diagram will be handy for any future maintenance or upgrades to the system. The diagram should include the location of all components, cable types, routing, and length.

This is the layout plan (Fig. 1) of how your Ulysses Nano C system will be setup.



Ensure the camera is connected to the POE injector port that has POE output.

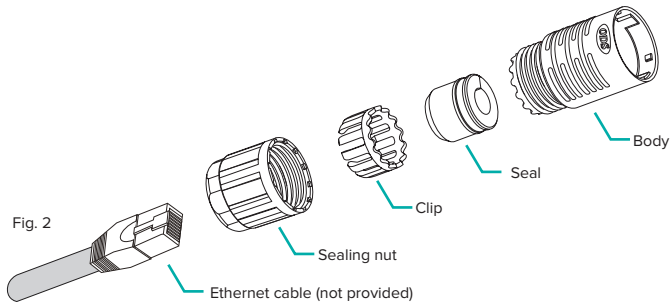
 Note that the Camera can be mounted ball-up (upright) or ball-down (upside-down) position.

Points to consider for installation of your products include:

- Identify and select a position with a clear line of sight to the intended observation area.
- The mounting surface should be horizontal and flat.
- Ensure that the Camera is installed in an accessible location for periodic cleaning, an inspection of mounting point integrity and mechanical soundness.
- Camera Turret mounting point should be sturdy and free from excessive vibration.
- The Camera should be mounted at a location that does not interfere with any radar, navigational or communications electronics.
- Infravision Technology products conform to the appropriate Electromagnetic Compatibility (EMC) regulations. To minimize electromagnetic interference between equipment, we recommend that wherever possible, Ulysses Nano C equipment and cables connected to it are:
  - at least 3ft (1m) from any equipment transmitting or cables carrying radio signals. e.g., VHF radios, cables, and antennas. In the case of SSB radios, the distance should be 7ft (2m).
  - more than 7ft (2m) from the path of a radar beam. A radar beam can be assumed to spread above and below the radiating element.

### 3.4 RJ45 Field Installable Connector

This connector is to ensure your RJ45 Ethernet connection on the camera end is water tight. The illustration below (Fig. 2) shows the parts breakdown. For detailed assembly instructions, download the RJ45 Field Installable Connector assembly guide from our website.



### 3.5 Mounting the Camera

The Camera can be configured to be installed ball-up (upright) or ball-down (upside-down) position. But, first, identify and select a position with a clear line of sight to the intended observation area. The mounting location should also be secure and free from excessive vibration.

1. Take note of the orientation of the Camera and place the base forward-facing relative to the bow of your vessel (Fig. 3). There is an arrow mark at the base of the Camera indicating the forward-facing of the Camera for installation. In most cases, this arrow should point towards the general direction of the vessel's bow.
2. Using the Mounting Template or Mounting Decal provided, mark and drill the 0.24in (6mm) holes required for attaching the Camera.

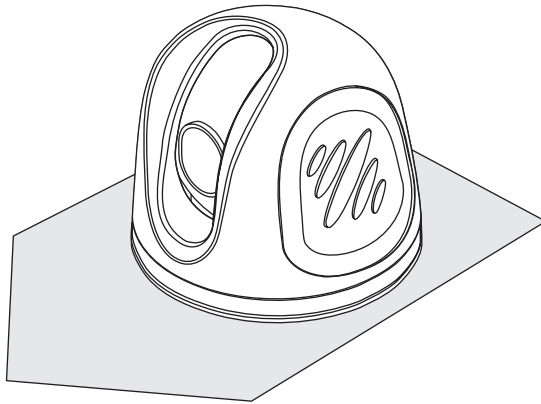


Fig. 3

3. Place the Camera base over the screw holes and secure the Camera with M5 screws, washers, spring washers, and nuts (Fig. 4). If using self-tapping screws, secure the camera with screws type #10 and washers (Fig. 3).
4. Take the harness from the base of the Camera, run it through the central hole, and connect it to an Ethernet cable.
5. Adjust the camera tilt angle to suit your view by manually tilting up / down the camera pod. The camera tilt can be manually adjusted  $-5^{\circ}$  to  $50^{\circ}$  in ball-up position or  $-50^{\circ}$  to  $5^{\circ}$  in ball-down position.
6. Install the top cover over the to the camera body to lock the tilt position (Fig. 5).

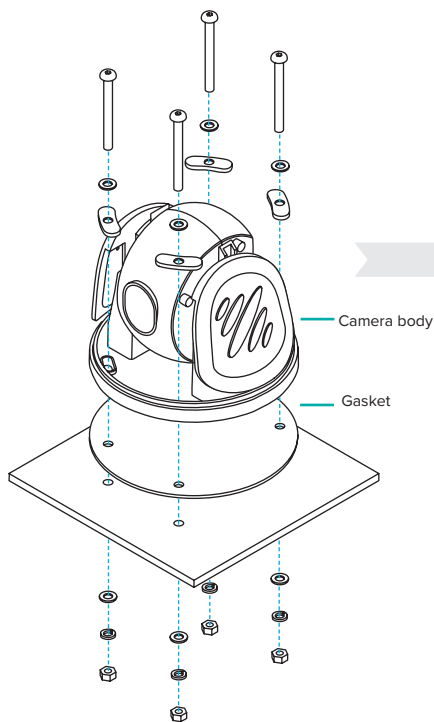


Fig. 4

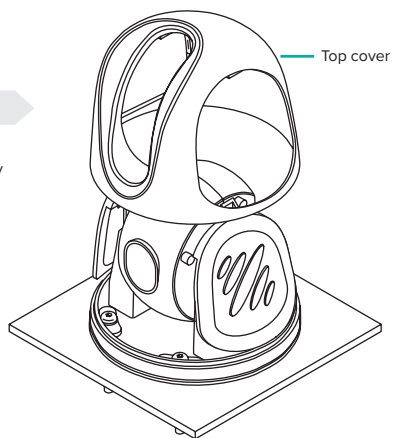


Fig. 5

If the camera is installed using self-tapping screws: Use the center hole on the Mounting Decal (Fig. 7) as a guide/pilot hole for the self-tapping screws. The recommended camera mounting self-tapping screw type is #10.

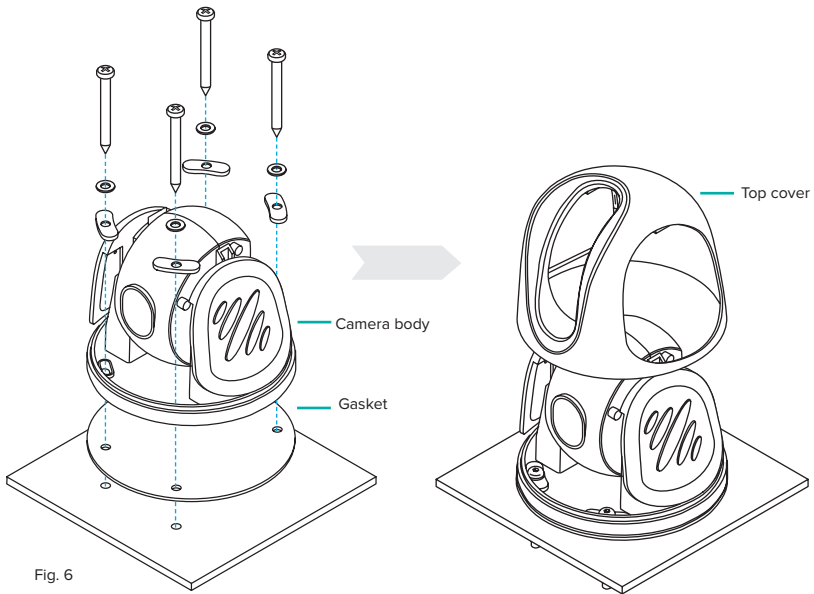


Fig. 6

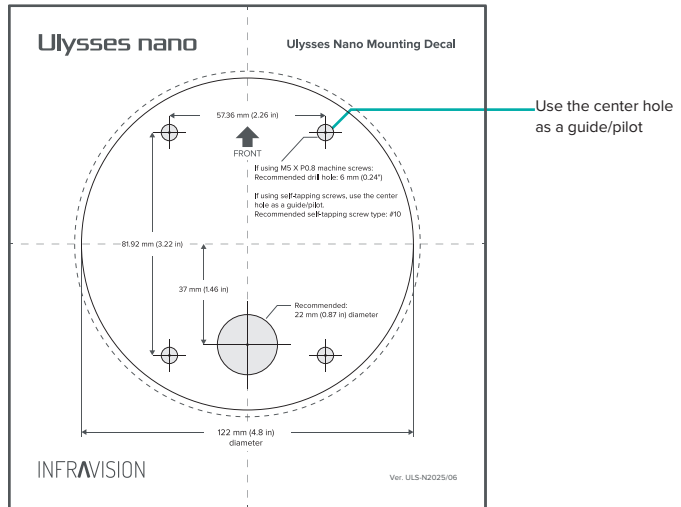


Fig. 7

### 3.5 Connecting to your MFD

Connect the camera to an Ethernet cable from the respective port marked [PoE] on the PoE Injector. Then connect an Ethernet cable from the PoE Injector port marked [LAN] to a compatible MFD. The camera should work with Navico MFDs by default. You should see a Ulysses Nano C icon displayed on the MFD after powering up the MFD and the camera system. Launch the Ulysses Nano C icon to use the camera.

If you are utilizing a Furuno, Garmin, Raymarine or Humminbird MFD, it is necessary to set up the camera system to communicate effectively in the correct network environment. You can achieve this using a web browser. For detailed instructions, please refer to sections 3.6.


### 3.6 Connecting to a laptop/desktop

Connect the camera to an Ethernet cable from the respective port marked [PoE] on the PoE Injector. Then connect an Ethernet cable from the PoE Injector port marked [LAN] to a compatible laptop or desktop. Next, on your web browser, enter the default IP address indicated at the base of the camera and log in with the following credentials:

Username: admin

Password: 12345

You can now access complete control of the Camera through the Web browser.

 Your laptop/desktop network connection needs to be configured with the same IP range of the Camera (see section 3.8).

### 3.8 Change IP settings

If you're unable to connect to the camera due to a different set of IP addresses, follow these steps to configure the camera for Windows users:

1. Go to Settings, then click on Network & Internet.
2. Right-click on your Ethernet network that is connected to the Camera and click on Properties (Fig. 6).
3. On the properties screen, select Internet Protocol Version 4 (TCP/IPv4) and click on Properties (Fig. 7).

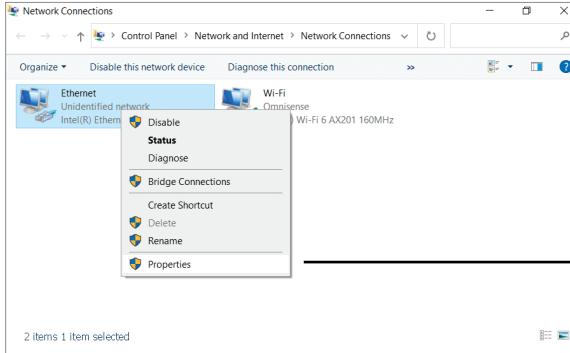


Fig. 6

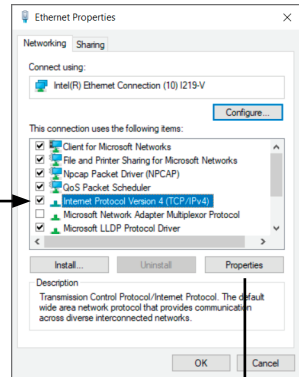


Fig. 7

4. On IPv4 properties screen, select Use the following IP Address option (Fig. 8).
5. Enter the following IP address: 169.254.6.xxx (any number except 225). As you can see in above image (Fig. 8), the first 3 number sets (169.254.6) in IP Address field need to be the same as the Camera IP address. You can only change the last number set with any number from 1 to 254. Click in the Subnet Mask area, which should auto complete. Click OK.
6. Launch your web browser and enter the following address <http://169.254.6.225/> and login with the following:

Username: admin  
Password: 12345

7. Full control of the Camera can be accessed through the Web Interface. You can configure the IP address to connect to your MFD from the Settings menu.

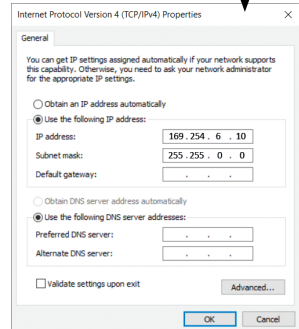


Fig. 8

## **04 - Operations**

### **4.1 Powering-up**

The Ulysses Nano C system will power up automatically when it is connected to your vessel's power source.

1. Ensure that you have connected the Ethernet cable to the Camera.
2. Ensure that your network cable and video output is connected and your display is powered on.

## 4.2 Login to camera

When connecting the camera system through an Ethernet connection via a PC/Laptop browser, you'll be prompted to log in. After powering up, the login screen will be displayed as shown below. To access the user interface, enter the password. The default password is "12345."

INFRAVISION

**Username**

**Password**

**LOGIN**

## 4.4 Display image

The camera's output is viewable on a compatible Multi-function display (MFD) or a desktop/laptop using a web browser.



The display screen comprises of the following icons:



Aspect Ratio  
16:9 & 24:9



Color sensor



FOV (Field of View)  
Ultrawide, Standard & Narrow



The icons on the display image indicate the active state of each function (see section 4.5).

## 4.5 Operating the camera

The camera functions can be accessed directly from a compatible Multi-function display (MFD) or a desktop/laptop using a web browser.

### 1. If you are using a Touchscreen MFD

Tapping anywhere on the screen will bring up the Quick Menu. To hide the Quick Menu, simply tap anywhere on the screen again.

### 2. If you are using a web browser

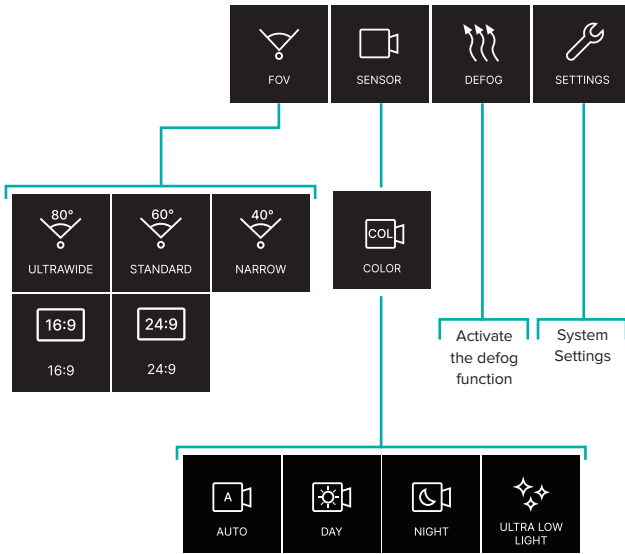
To activate the Quick Menu, use your mouse to click anywhere on the screen. Click anywhere on the screen again to hide the Quick Menu.

The Quick Menu will automatically be hidden after 3 seconds of inactivity.



# 05 - Quick Menu

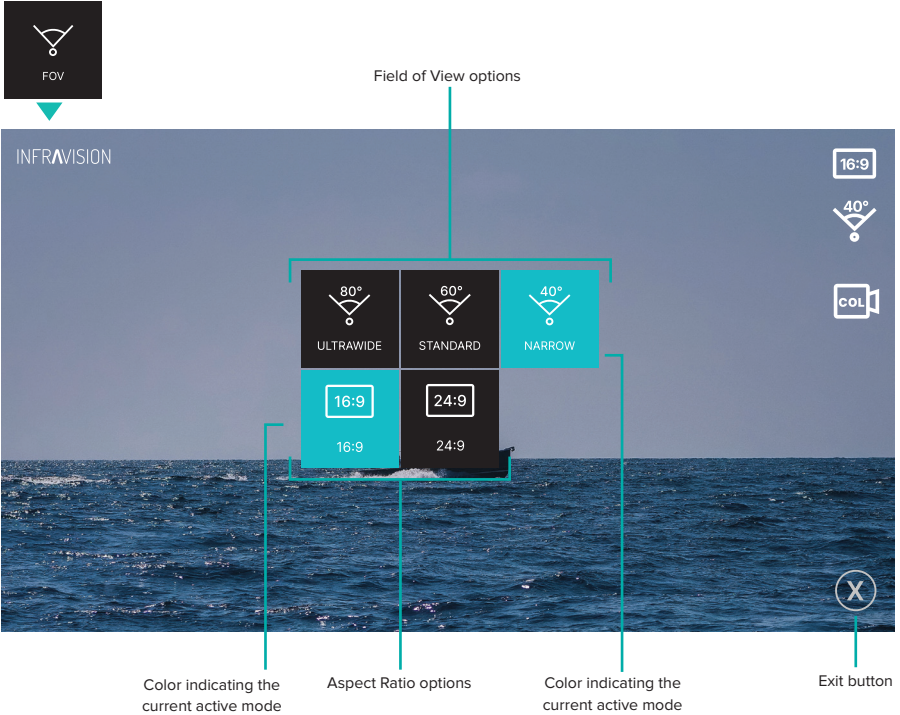
To access the Quick Menu, a single tap on the touchscreen is all that's needed.



## 5.1 FOV & Aspect Ratio

The (FOV) setting allows you to adjust the (Field of View) angular wideness of the camera's view and the video's aspect ratio.

1. Select [FOV] button to choose the preferred FOV angle and/or aspect ratio.
2. Select (X) or tap anywhere on the screen to exit the menu.

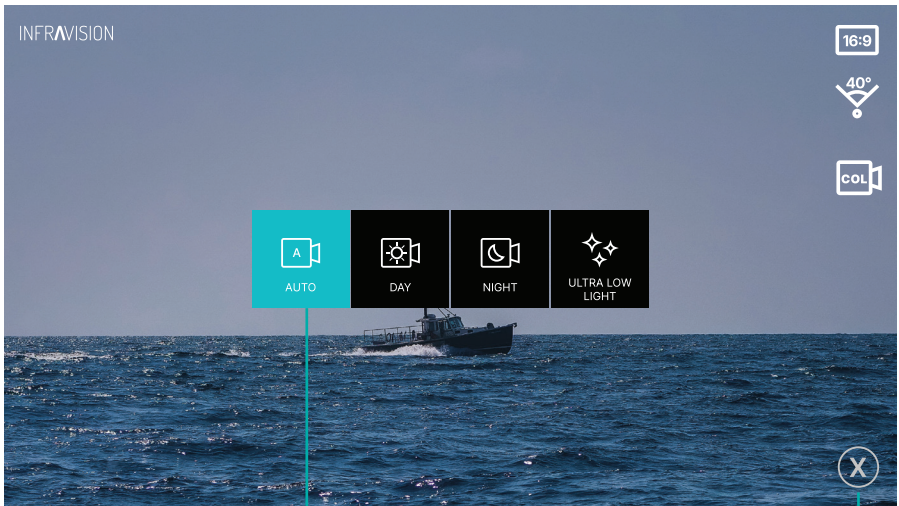
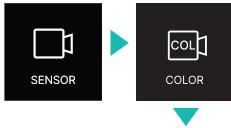


## 5.2 Sensor

The sensor button directs you to the current sensor view. Since the Ulysses Nano C has only one viewing mode, only the “Color” mode will be available.

The default setting for the Color sensor is “Auto,” allowing the camera to automatically determine the mode based on the prevailing lighting conditions. On this screen, you have the option to override this setting and manually choose from Day, Night and Ultra Low Light modes.

1. Select [SENSOR] ► [COLOR] to view the four distinct modes.
2. Select your preferred mode.
3. Select (X) or tap anywhere on the screen to exit the menu.




Color indicating the current active mode

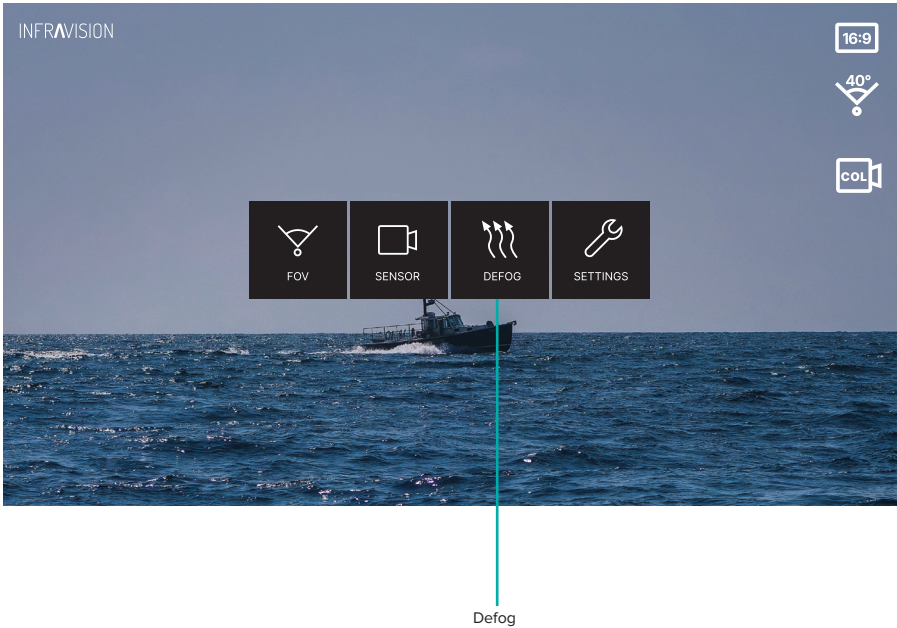
Exit button

### 5.3 Defog

Select [DEFOG] to enable the camera defogging feature. This feature offers a solution for challenging weather and adverse atmospheric conditions, such as fog, drizzle, smog, or smoke, which can severely degrade image quality to the point of making it unrecognizable.

The Defog feature works by continually analyzing the uncompressed video signal and making real-time adjustments to the colors, contrast, and sharpness of the optical signal. As a result, the camera can generate clear and easily recognizable images, even in situations with dense fog.

 When this function is activated, the camera system can detect foggy weather conditions through and it automatically optimizes the image to ensure a clearer view.

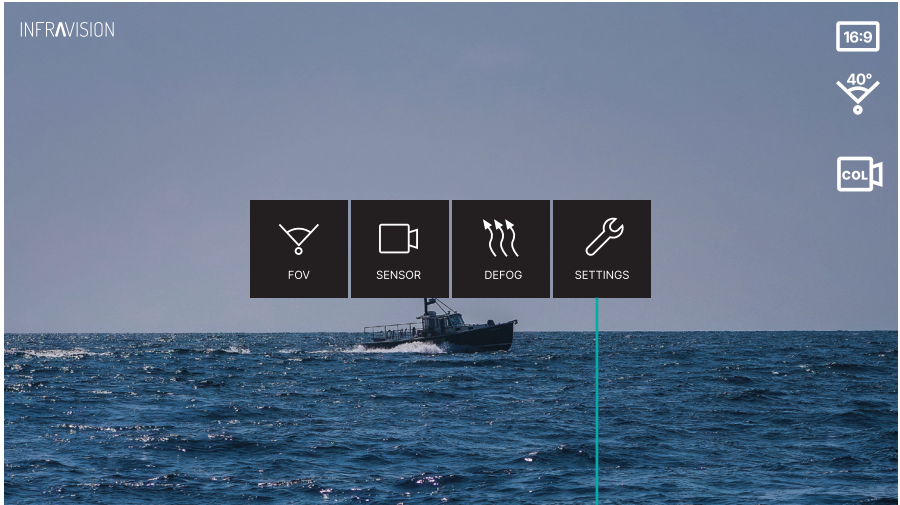


# 06 - Settings

To enter the Settings menu, select [SETTINGS]. The Settings menu is categorized into two sections: User Setup and System Setup. The User Setup menu is designed for day-to-day camera system operation, while the System Setup offers more advanced configuration options.

Within the User Setup menu, you can access and view/adjust the following configuration:

- 1. Information
- 2. Brightness and Contrast
- 3. Setup - refer to chapter 07 - System Setup

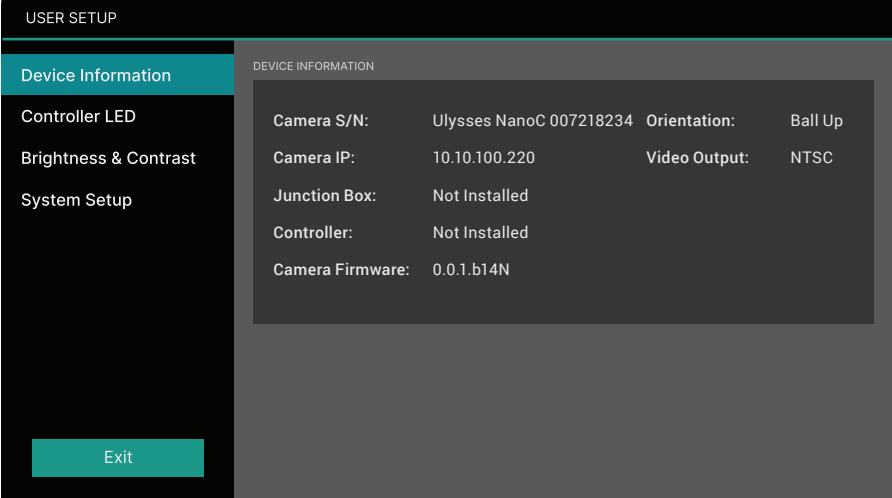


Settings

## 6.1 Device Information

The Device Information screen provides an overview of the camera system configuration. The information displayed on this screen is not changeable and is intended for informational purposes only.

 The below values are for illustration purposes. The values shown on your system will vary.



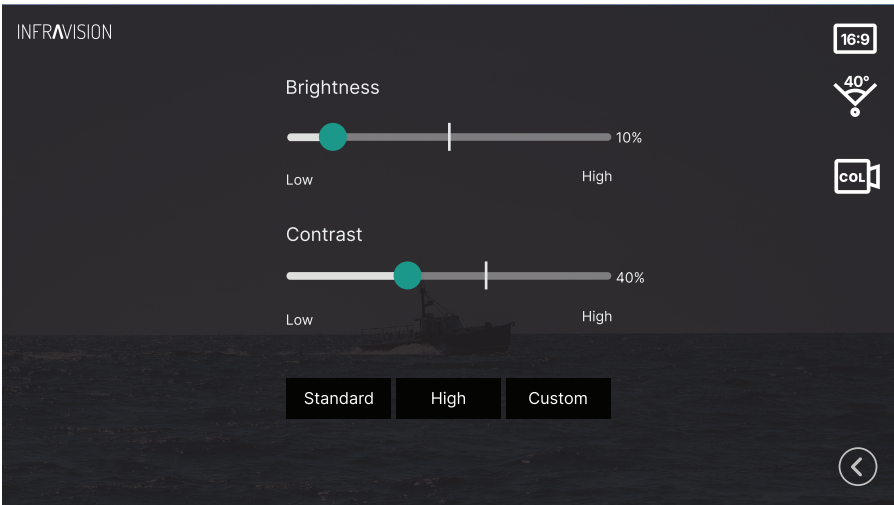
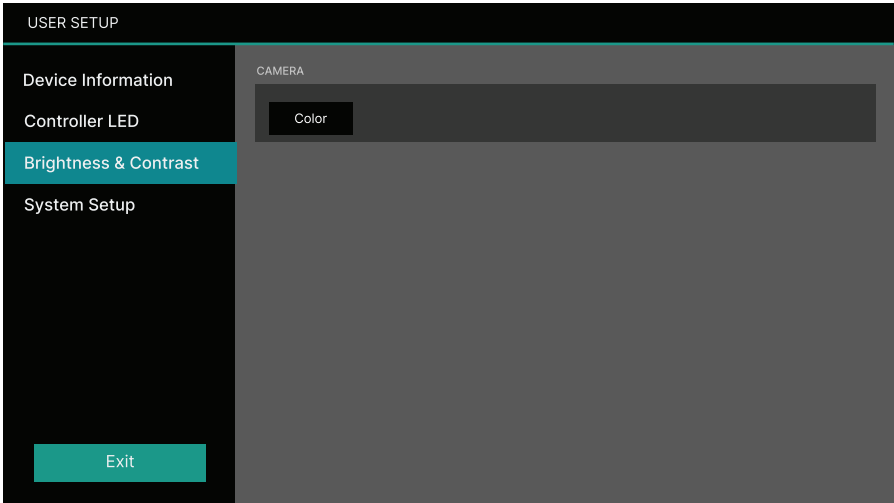
The screenshot shows a 'USER SETUP' menu with a sidebar on the left containing 'Device Information', 'Controller LED', 'Brightness & Contrast', and 'System Setup'. The 'Device Information' option is selected, displaying a table of system details. An 'Exit' button is located at the bottom of the sidebar.

DEVICE INFORMATION			
Camera S/N:	Ulysses NanoC 007218234	Orientation:	Ball Up
Camera IP:	10.10.100.220	Video Output:	NTSC
Junction Box:	Not Installed		
Controller:	Not Installed		
Camera Firmware:	0.0.1.b14N		

## 6.2 Brightness & Contrast

You can improve the visual quality of images that might seem overly dim, excessively bright, or deficient in contrast by making adjustments using the Brightness & Contrast settings:

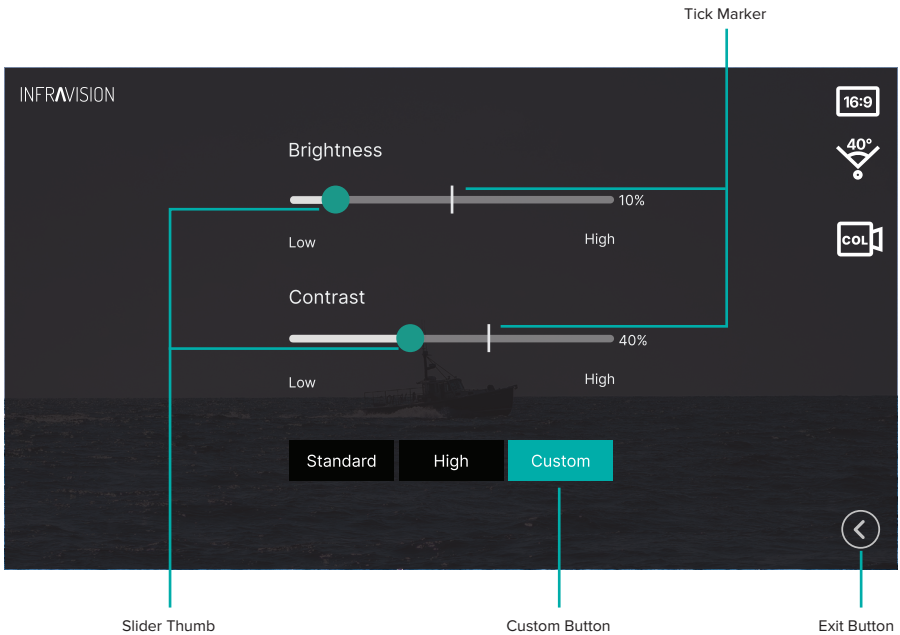
1. Select [Color] button to make adjustment.
2. Select either [Standard] or [High] buttons to adjust the image quality on the screen.
3. Tap anywhere on the screen or select ⏪ to return to the setup menu.
4. If you prefer to make custom adjustments, select the [Custom] button. See next section.



## 6.2.1 Custom Brightness & Contrast

You have the ability to manually adjust the Brightness and Contrast on this screen. Sliders will appear on the screen above the buttons, and each slider includes a tick marker to indicate the recommended value for that specific setting.

1. Select [Custom] to activate the sliders.
2. To achieve the desired level of brightness, simply move the Brightness slider thumb left or right along the track.
3. To achieve the desired level of contrast, simply move the Contrast slider thumb left or right along the track.
4. Tap anywhere on the screen or select (◀) to return to the setup menu.

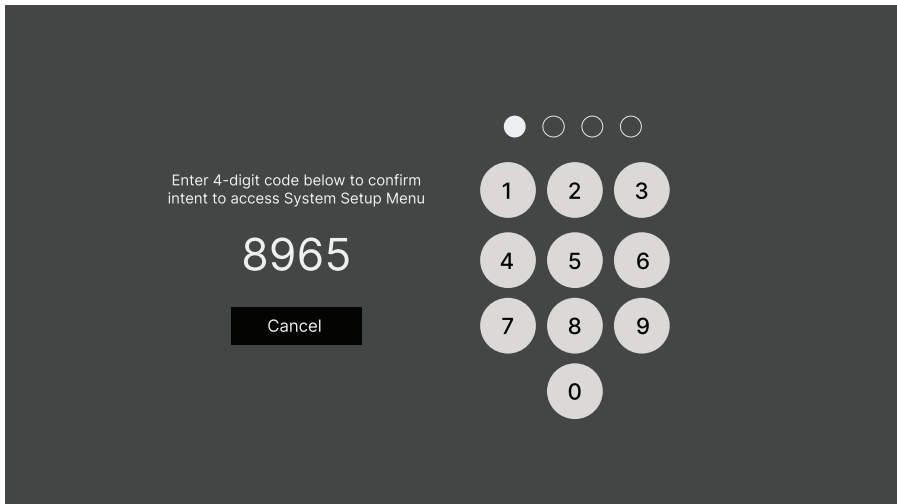


## 07 - System Setup

To enter the System Setup, select [System Setup] from the User Setup menu. Within the System Setup menu, you can modify the system configuration, which encompasses the following categories:

1. Device Access
2. Video
3. Position
4. Function
5. Junction Box
6. NMEA

To access the System Setup, you will be prompted to enter a random auto-generated login to confirm your intention to access the configuration. This additional step is implemented to prevent accidental access to the configuration.



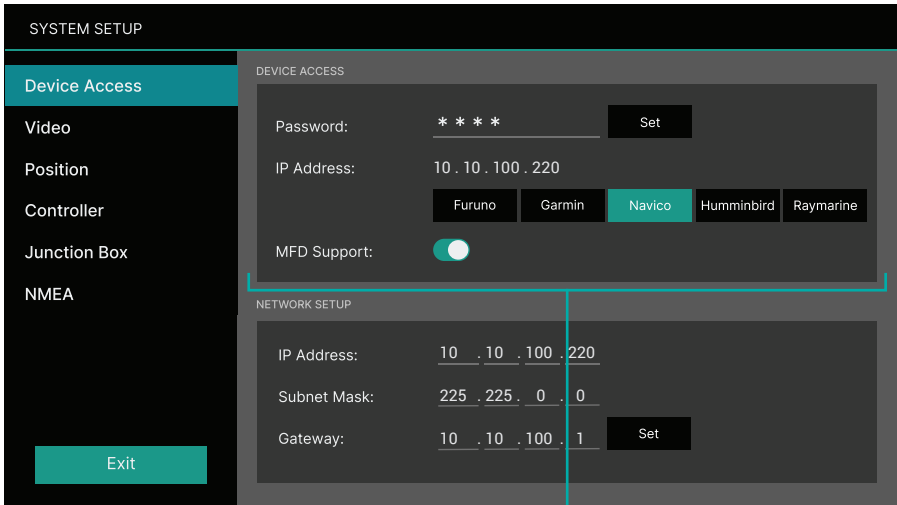
To continue, enter the 4-digit code displayed on the screen using the keypad to access the System Setup. If you wish to exit, you can select [Cancel].



Modifying the System Setup configuration can potentially lead to the camera system not functioning as intended. It is strongly recommended to thoroughly read the User Manual before making any changes to the configuration.

## 7.1 Device Access

The Device Access section of the camera system includes settings for the password, IP address, MFD Support, and Network Setup.



Device Access

### 7.1.1 Password

1. Select the password field (default password is 12345).
2. Input your desired password and then choose [Set] to make the change.
3. Select [Save and Reboot] on the dialog box to confirm.
4. The new setting will take effect after the system is rebooted.

### 7.1.2 IP address

The IP address is set to configure for a Garmin MFD by default. However, if you are using a Furuno or Navico MFD, you can set the IP address to configure to one of the supported brands using the preset buttons. Then, the camera IP will automatically change to a matching IP similar to the IP domain of the respective supported brand.

To change the IP address for either Furuno, Navico, Humminbird, or Raymarine MFD:


1. Select on either one of the preset buttons - [Furuno], [Humminbird], [Navico] or [Raymarine] button to generate a set of IP address.
2. Select "Set" and then Select [Save and Reboot] on the dialog box to confirm.
3. The new setting will take effect after the system is rebooted.

### 7.1.3 Changing the IP address manually



If there is a conflicting IP address with other connected devices within the network, you can manually change the camera's IP address (see Network Setup 7.1.5).

## 7.1.4 MFD Support

The system is compatible with most Furuno, Garmin, or Navico brand MFD. The MFD support is switched on by default. When you switch on the MFD and Ulysses Nano C system, the MFD will automatically detect the camera and display the Ulysses Nano C icon on the screen. You can launch the Ulysses Nano C user interface (UI) by selecting on the icon.

 Do not turn off this function unless it's necessary, such as when you have multiple MFDs connected within the network.

To turn off/on the function:

1. Slide  to the right to turn on or slide  to the left to turn off.



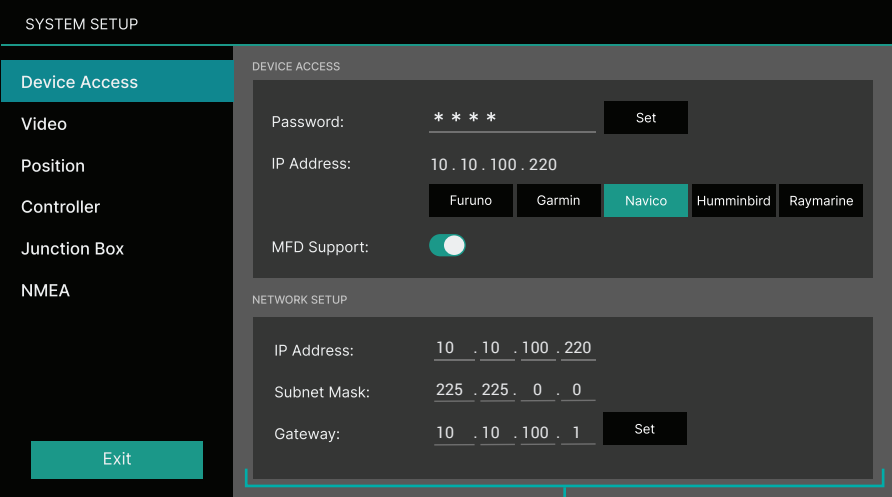
Once the [MFD Support] function is switched off, the MFD will not be able to detect the camera or launch the app. To switch it back on, you will need to connect the camera to a computer/laptop and access this function [MFD Support] via a web browser.

## 7.1.5 Network Setup

In this section, you can manually configure the IP address, subnet mask, and gateway for the turret unit. Change the settings accordingly if they cause IP address conflict with other devices in your network.

To change the IP address settings:

1. Select the IP field (IP Address, Subnet Mask or Gateway) that you wish to change.
2. Enter the preferred IP address and then Select [Set].
3. Select [Save and Reboot] on the dialog box to confirm.
4. The new setting will take effect after the system is rebooted.



The screenshot shows the 'SYSTEM SETUP' interface. On the left is a navigation menu with options: Device Access (highlighted), Video, Position, Controller, Junction Box, and NMEA. At the bottom of the menu is an 'Exit' button. The main area is divided into two sections: 'DEVICE ACCESS' and 'NETWORK SETUP'. In 'DEVICE ACCESS', there is a 'Password' field with four asterisks and a 'Set' button. Below that is an 'IP Address' field with the value '10 . 10 . 100 . 220'. Underneath the IP address are five buttons for device brands: Furuno, Garmin, Navico (highlighted), Humminbird, and Raymarine. At the bottom of this section is an 'MFD Support' toggle switch, which is currently turned on. The 'NETWORK SETUP' section contains three fields: 'IP Address' (10 . 10 . 100 . 220), 'Subnet Mask' (225 . 225 . 0 . 0), and 'Gateway' (10 . 10 . 100 . 1) with a 'Set' button next to it. A red bracket at the bottom of the 'NETWORK SETUP' section points to the label 'Network Setup' below the screenshot.

Network Setup

## 7.2 Video

In this section, you have the capability to modify the video Frame Rate and Bitrate. You can also adjust the analog video output format as necessary.

### 7.2.1 Frame Rate

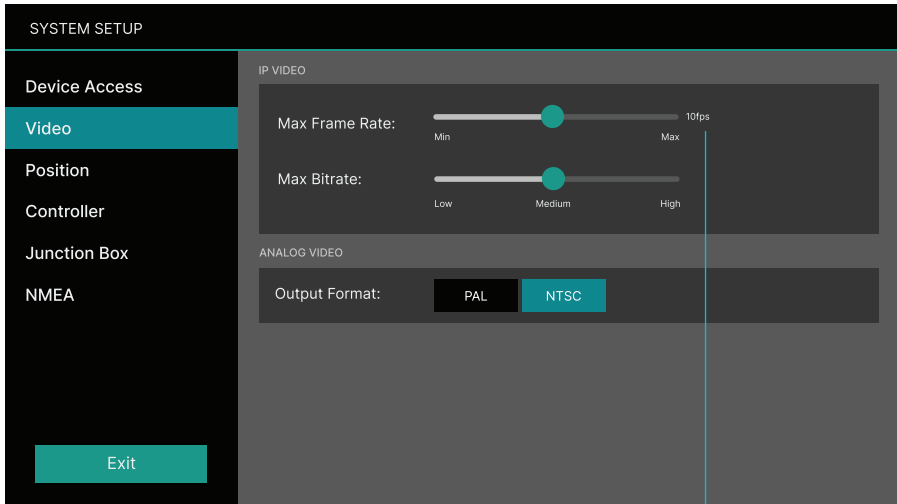
Adjust the Frame Rate using the slider to discover the ideal setting that achieves your desired image quality.

### 7.2.2 Bitrate

Use the slider to manipulate the bitrate and explore, selecting the optimal bitrate that produces the highest image quality.

### 7.2.3 Analog Video

You can choose between the PAL or NTSC analog video output formats. Simply select [PAL] or [NTSC] to activate it after the system is rebooted.



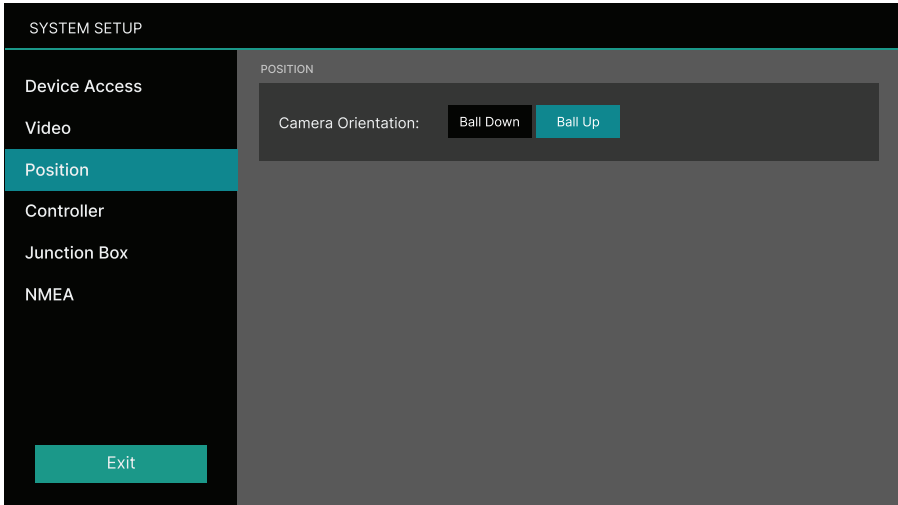
Current Frame Rate  
indicator

### 7.3 Position

In this section, you have the ability to customize the Camera mounting orientations according to your preferred configuration.

#### 7.3.1 Camera Orientation

Depending on how you have mounted your turret, you will need to select either [Ball up] with the camera unit mounted “upright” or [Ball down] with the camera unit “upside-down”. Select the appropriate orientation [Ball Up] or [Ball Down]. The camera orientation will be registered and will take effect after the system is rebooted.



## 7.4 Controller

If you are using the Joystick Controller(s), you can set up the connection to the Joystick Controller(s) in this section.

### 7.4.1 Controller S/N

If you have paired the Camera to more than one Joystick Controller, you can scroll through the list of paired Joystick Controllers by using the ◀ or ▶ to view the serial numbers of the Joystick Controllers or to change the controller's IP address. Only Joystick Controllers paired with the turret will be displayed in this section.

### 7.4.2 Changing the Joystick Controller's IP address

If the Joystick Controller's IP address is causing conflict with other equipment in the network, you can change the IP address manually. To change the IP address:

1. Select the IP address field and enter the desired IP address
2. Select [Set] to apply the new IP address.
3. Select [Save and Reboot] on the dialog box to confirm.
4. The new settings will be registered after the reboot.

### 7.4.3 Connecting additional Joystick Controller(s)

The system is designed to pair to additional Joystick Controller(s). To pair additional Joystick Controller(s) to the camera, simply repeat the steps mentioned below.

1. Select [Scan] to show all unpaired Joystick Controller(s) in the list.
2. Select ⊕ to pair the desired Joystick Controller from the list.

Upon completing the aforementioned steps, the recently paired joystick will appear in the Controller S/N list. The system will autonomously configure its IP address to align with the turret.

To change the brightness of the LED, please refer to 6.3 Controller LED.

The screenshot displays the 'SYSTEM SETUP' interface. On the left is a navigation menu with options: Device Access, Video, Position, Controller (highlighted), Junction Box, and NMEA. At the bottom of the menu is an 'Exit' button. The main area is divided into two sections: 'CONTROLLER' and 'DETECTED CONTROLLER'. The 'CONTROLLER' section shows 'Controller S/N:' with a scrollable list containing 'ULS-OMS-CR-091905' and 'IP Address:' with the value '222 . 167 . 198 . 122' and a 'Set' button. The 'DETECTED CONTROLLER' section has a 'Scan' button and a list of detected controllers. The first entry is 'ULS-OMS-CR-091906' with a plus sign (+) button to its right. Two red lines with arrows point from the text below to the plus sign and the serial number.

Joystick Controller's serial number

Select this to pair to the Joystick Controller

## 7.6 Junction Box

In this section, you can view the Junction Box 2.0 serial number and IP address. In addition, you can change the Junction Box 2.0's IP address and set the serial NMEA 0183 baud rate..

### 7.6.1 Junction Box 2.0 S/N

You can view the serial number and the IP address of the Junction Box 2.0. Use the ◀ or ▶ to scroll through the list of connected Junction Box 2.0.

### 7.6.2 Junction Box 2.0 IP Address

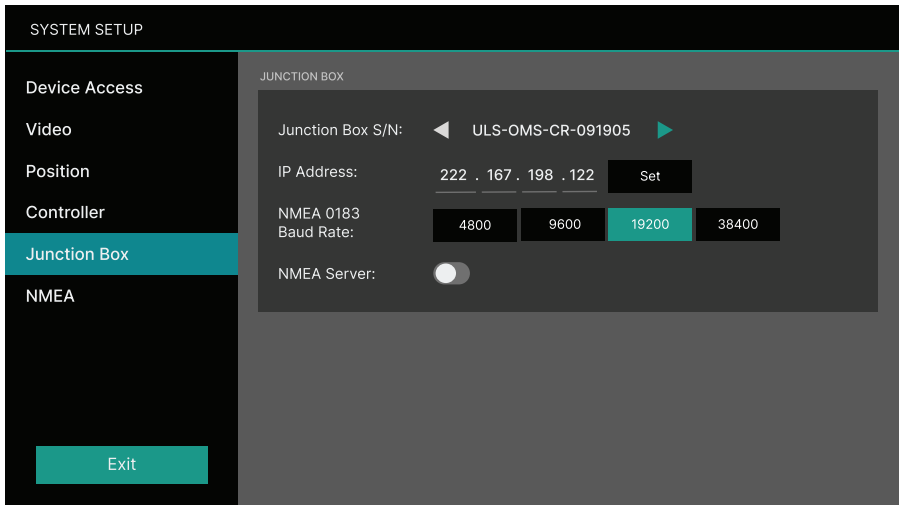
The current IP Address is displayed here. If you need to change the IP address of the Junction Box 2.0 to prevent IP conflict within the network, enter a new IP address and click [Set].

### 7.6.3 NMEA Baud Rate

You can set the serial NMEA baud rate to either 4800, 9600, 19200, or 38400 to complement your existing electronic navigational equipment, such as your radar, GPS and/or AIS.

### 7.6.4 NMEA Server

The  enabled/disabled the camera to acquire the serial NMEA data on the selected Junction Box 2.0.



## 7.7 NMEA

The camera is able to receive NMEA data via Ethernet. This page allows you to configure the server IP and Port of the NMEA equipment. Slide  to the right to activate the camera to listen to the NMEA data via Ethernet and perform functions related to NMEA data (if the NMEA sentences are correct).

The screenshot shows a web interface for system setup. On the left is a dark sidebar with a menu: 'SYSTEM SETUP' at the top, followed by 'Device Access', 'Video', 'Position', 'Controller', 'Junction Box', and 'NMEA' (highlighted in teal). At the bottom of the sidebar is a teal 'Exit' button. The main content area is titled 'NMEA (ETHERNET)' and contains three settings: 'NMEA Status' with a toggle switch that is currently off; 'NMEA Server IP' with the value '222 . 167 . 198 . 122'; and 'NMEA Server Port' with the value '2227' and a 'Set' button next to it.

## 08 - Maintenance

### 8.1 Caring for the camera

#### **Cleaning:**

After each trip out at sea, gently flush the Camera with fresh water to prevent the accumulation of minerals from saltwater and sea spray.

The sensor lens has a protective coating that may be easily damaged. Do not use paper or any dry fabric to wipe the lens. Use a soft cloth instead and a small amount of mild soap if you need to remove any stains on the lens. Do not apply pressure, as this could result in damage.

#### **Ensuring the integrity of the installation:**

Perform routine inspection of the camera, controller, and mounting surface to ensure that it is securely installed. With the system powered off, grasp the camera and controller firmly at the base to confirm that it is secured soundly.

#### **Do not leave the lens pointed at the sun:**

Do not leave or park the lens pointed at the sun for an extended period. Intense light and heat magnified by the lens may cause damages or deterioration of the image sensor.

### 8.2 Storage

If the camera is not going to be used for an extended period, uninstall and store it covered in a cool, dry, well-ventilated area.

Do not store your camera with naphtha or camphor mothballs or in locations that are:

- poorly ventilated or subject to humidity over 60%
- next to equipment that produces strong electromagnetic fields, such as televisions or radios
- exposed to temperatures above 70°C (158°F) or below -30°C (-22°F).

### 8.3 Service and maintenance

This product contains no user-serviceable components. With the exception of regular cleaning, please refer all maintenance and repair to Infravision Technology. Unauthorized repair will void the manufacturer's warranty.

## 09 - Specifications

<b>General</b> Sensor Type Horizontal Field of View (HFOV) Lens	Color Camera 8.5MP CMOS 80° 3.7mm
<b>System Specifications</b> Tilt Adjustable Angle (manual) Video Output Video Frame Rate Power Requirements	-5° to 50° IP Video 25Hz / 30Hz POE, 9W max
<b>Environmental</b> Operating Temperature Storage Temperature Encapsulation EMI / Salt Mist / Vibration Wind	-13°F to 131°F / -25°C to +55°C -22°F to 158°F / -30°C to +70°C IPX6 IEC60945 115mph / 100kn
<b>Dimensions</b> Size Weight	4.8" X 4.4" / 122mm X 113mm ≤ 1.3lb / 0.6kg

**Note:**

1. Due to our policy of continual improvement, specifications may change without prior notice.
2. System must not be used in replacement of human observation.

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